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CHARACTERISTICS OF SUCCESSFUL FREE-RESPONSE TARGETS: THEORETICAL CONSIDERATIONS

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ABSTRACT

This paper describes theoretical ideas from a variety of sources as to what might be expected to make a successful free-response GESP target. Popular "how to be psychic" literature, analyses of the characteristics of spontaneous cases, and theoretical suggestions from psychology and parapsychology show considerable consistency in their suggestions about the likely features of a good target. Two main recommendations appear to emerge from these sources - good GESP targets should be *psychologically salient* and *physically salient*: 1. targets in parapsychological research should be meaningful, have emotional impact and human interest - this may make them salient in the minds of our experimental participants; and, 2. targets should also be physically salient by standing out from their backgrounds - properties such as movement, novelty, brightness and contrast tend to make stimuli physically salient.

CHARACTERISTICS OF SUCCESSFUL FREE-RESPONSE TARGETS: THEORETICAL CONSIDERATIONS₁

INTRODUCTION

Deborah Delanoy (1988) examined the observations from some free-response literature on what makes a good GESP target. Despite the flaws and contradictory findings seen in this literature, it was possible to make a few general statements about what experimenters believe constitutes a good GESP target. This paper can be seen as forming the second half of our observations and thoughts about targets in parapsychological research. Delanoy described what *is* currently believed about the characteristics of successful GESP targets, concentrating on relatively formal free-response experiments in parapsychology. In contrast this paper describes theoretical suggestions as to what *might be expected* to make good targets, roaming more widely (and consequently with less depth) over some varied literature which has something relevant to say on this question.

As stressed by Delanoy, our combined efforts are far from comprehensive, being primarily aimed at getting some idea of what kind of targets we should use in our research in Edinburgh. To do this, we looked through some parapsychological journals (JASPR, JP, JSPR, EJP, IJP), parapsychological abstracts, PA and PF convention proceedings, RIP, Parapsychology Review, certain "relevant" books held in the Koestler Chair library, and I have also examined some psychological research which I consider relevant to the target question. Particular attention was given to cases where authors made specific comments about the characteristics of successful GESP targets.

Firstly, this paper briefly considers so-called "Airport Project" books [named after some research by Professor Robert Morris and his students using the kind of "how to be psychic" books which can be found in airport bookshops (Morris, 1977)]. Secondly, the paper examines (again briefly) the kind of "target" information which seems to be transmitted in people's spontaneous psychic experiences. Thirdly, this paper considers some theoretical suggestions by parapsychologists as to what might be expected to make a good GESP target. Then I make some suggestions of my own on possible characteristics of a successful GESP target, derived from some of the psychological literature on human-environment interactions, curiosity, attention, and attributions of causality. The paper ends with a summary and conclusions.

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1. "AIRPORT PROJECT" BOOKS

A skim through the 21 "how to be psychic" books which form part of the Koestler Chair library, and which I felt might have some comments to make about targets, found only 6 authors who made recommendations on what might make a good target when training psychic powers. Even then, the authors invariably failed to define their terms or write more than a sentence on the subject. These recommendations should therefore be treated with caution, as they do not represent the findings of careful scientific experimentation. On the other hand, they may have something to suggest about popular ideas of what makes a good GESP target, and these ideas may be based on some grain of truth.

Boswell (1969) recommended the use of "mentally stimulating" targets. Also, he felt that physical sensation and especially emotion were easily transmitted, and that colour was picked up better than black and white. Edwards (no date) suggests that faces and pictures make good targets. Denning & Phillips (1981) recommend trying to transmit a message of emotional significance to the receiver. Likewise, Sherman (1960) says that it is crucial to have some emotional content to the target. A related area of interest is psychometry, where an object is used to provide further information about its owner. Powell (1979) recommends using as a token object metal or leather which has been close to the skin for a long time and therefore has had a chance to build up some personal association with the owner. Finally, Burns (1981) feels the following make good practice targets for developing GESP: pictures (rather than words); something experienced vividly by the agent; flavours; body position of the agent, or whether the agent is sitting in the light or dark; and sizes and weights of objects.

There do seem to be some common themes in these authors' suggestions, though the small sample covered here means that any patterns could be illusory: emotional impact seems to be important (though little is said about whether the specific emotions should be positive or negative ones); and targets conveying information about events happening to humans seem popular.

2. SPONTANEOUS CASES

There is a considerable literature concerning the sort of information conveyed in spontaneous cases of ESP, and so as a necessary constraint this section is limited to observations from Sybo Schouten's (1979b, 1982) examination of two great collections of spontaneous cases - *Phantasms of the Living* and the Louisa Rhine collection.

Schouten made a quantitative analysis of these collections with a view to finding patterns and relationships which might stimulate further experimental research. As he pointed out, the two collections covered quite different cultures and eras, and were gathered for different purposes. The collectors of the "Phantasms" cases took great pains to investigate and verify their cases, and had a special interest in receiving apparition reports as they felt these might lend support to their hypothesis that

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information transmitted in spontaneous cases came from living rather than deceased persons. In contrast, the Rhine collection took cases more or less at face value, with the idea that inaccuracies would cancel each other out over a large number of cases, and the reports were gathered with the aim of providing suggestions for future laboratory research (Schouten, 1986).

Excluding 150 of the cases (for reasons outlined in Schouten 1979b), Schouten analysed the remaining "Phantasms" cases according to 32 previously-defined categories (Schouten, 1979a) and found that about 75% of the cases involved death, illness or injury to the target person, though a tendency to remember serious events for longer than trivial events accounted for some of this pattern. Only 1.4% of cases conveyed information about positive experiences of the target person.

Table 1 (from Schouten, 1979b, p.432)

Situation of target person at time of experience

death	66.7%
serious illness	12.5%
slight injuries	8.7%
serious material	.5%
slight material	.2%
trivial	10.0%
positive	1.4%

It is interesting to note that slight personal injuries were more often the topic of spontaneous experiences (8.7%) than serious material damage (for example, a building on fire, considerable financial loss) (0.5%). This suggests that negative events related to humans are particularly strong targets in spontaneous cases.

Similar patterns are observed in Schouten's (1982) study of the Rhine collection, where he analysed a representative sample (15%) of cases (excluding PK). About 75% of the sample concerned negative events such as death, injury and accident while almost no cases concerned material damage. As with the Phantasms study, a tendency to remember and report serious events more often than non-serious events accounts for some of this pattern. However, the distribution of negative events in the Rhine collection differs from the Phantasms collection, with the former having fewer cases involving death of the target person (37.7% compared with 66.7%), but more cases involving serious accidents and slight injuries. As Schouten points out, part of this difference may be due to the Phantasms collectors' preference for apparition cases.

In summary, Schouten's analyses of spontaneous case collections suggest that **negative events related to humans** feature predominantly as "targets", although this observation may be partly due to a reporting bias. It is significant that both the Rhine and the Phantasms cases share this pattern despite the very different methods used

to gather these collections. Evidently parapsychologists cannot inflict physical injury on their experimental participants in order to simulate real-life spontaneous cases. However, negative physical events are likely to have a negative emotional impact both on the target person and on the percipient (especially if they are emotionally close). Possibly, therefore, targets which have some strong negative emotional impact on a person may have more success in a free-response experimental setting than trivial or impersonal targets. Further, it might be expected that any emotional impact is better than none, and so positive emotional targets could perhaps be successfully used in experimental research - this might circumvent any researcher's concern about the ethics of exposing experimental participants to unpleasant targets.

3. THEORETICAL SUGGESTIONS BY PARAPSYCHOLOGISTS

Although this is not a comprehensive review, I have tried to cover instances where authors have made specific comments about likely successful targets. Their suggestions range from post hoc inferences based on the kinds of targets which were successful in experimental studies to observations of what makes a good target in areas of research related to parapsychology.

Le Shan (1977) criticizes parapsychologists for often neglecting to consider the theoretical assumptions underpinning their research. There has been little discussion, he feels, of what *kind* of information psi transmits even though there seems to be wide agreement that psi does transmit information. As an example of how theorising on this issue might influence our experimental design and choice of target material, Le Shan considers the possibility that psi might depend on individual differences, being better adapted for one purpose with one person and another purpose in a different person. In this case, he suggests we should "customize" our targets by examining experimental participants for their personal interests, philosophies, preferred sensory modalities, and so on.

One of the few studies specifically to examine how target characteristics relate to psi performance was conducted by Williams & Duke (1979), who go on to discuss theoretical suggestions derived from their observations. Taking an evolutionary perspective and asking what sort of information might have been most crucial to communicate before language evolved in humans, they conclude that targets reflecting "emotion, sex, survival, nature, food and other basic concerns might be psychically perceived better than other types of targets" (p.15)

In a similar vein, a theoretical paper by Nash (1980) on the characteristics of psi communication considers that, to be effective, psi communication must convey "meaningful information". Also, one of the Maimonides experimental participants, in a letter to Ullman and Krippner, gave her overall impressions of a dream telepathy series in which she had recently participated. She felt that the more "potent and unusual" the target material the better, because with subjects who might be subconsciously afraid of telepathy this kind of target might be less likely to be "kept out" (Ullman & Krippner, 1973). Perhaps unfortunately, it is very rare to find any published opinions from the experimental participants who play a crucial part in parapsychological research.

William Braud (1982) questioned the assumption which appears to underlie much of our research - that psi involves redundancy with our other known senses. For instance, most of our experimentation involves primarily visual targets such as art prints. Braud suggests that it would be useful if psi provided information which is not immediately evident to our other known senses. Such non-evident information could concern the larger relationships in which a target participates, for example its history. Similarly, Gertrude Schmeidler in her 1971 PA Presidential Address stated that the ESP target is not the physical stimulus variables, but the "meaning" of the target or an "informational pattern" (Schmeidler, 1972). Braud conducted a pilot experiment to test the theory of non-evident psi, where subjects were confronted with five identical boxes containing, respectively, three control objects and two samples of hair cut from one person's head. The hair samples were therefore related to each other, while the control objects had no long-term association to a particular person. Subjects were told which box was the "key" (one of the two boxes containing a hair sample) and, while remaining unaware of the contents of all the boxes, were asked to rank the remaining four boxes according to how "related" their contents were to the contents of the key box. This study failed to achieve significant results, but this may still be an idea worth further investigation.

The 1986 Esalen Conference discussed techniques to improve the reliable practical use of psi abilities. Targ (1987) recommended that experimenters look for common elements in the "psychic appearance" of targets (i.e. in mentations), and that they should compose a glossary of typical target transformation errors. Tart (1987), at the same conference, suggested that experimenters create a pool of "hot" targets - ones that are consistently successful, either because they are correctly described or are described in a recognisable fashion. In other words, what makes a good target would be defined operationally.

So far, this section has considered research purely within parapsychology. Some parapsychologists have taken a more interdisciplinary approach, however, and have related the findings from other areas of research back to the question of what makes a good GESP target.

Tart (1982) looked at how responses to targets are measured in conventional psychophysiology, and asked what were the characteristics of a successful target in this field of research: what kind of stimuli are most readily responded to, and easiest to analyse. To be successful, a target stimulus in psychophysiology should **stand out from its background**. For targets in parapsychological research, this may be achieved by having the target stimulus occur suddenly, be discrete in time, and have what Tart calls "psychic intensity" - the sense that the target is important and meaningful within the experimental context. Tart suggests that we could instruct our experimental participants on the significance of the target in order to give it the required meaningfulness. Psychic intensity could also reflect an intense event happening to an agent - a methodology which Tart finds attractive. The idea that a good target should stand out from its surroundings is strongly supported by the psychological literature on human attention which I will be introducing later.

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A second research concerns subliminal perception, or preconscious processing (Dixon, 1981). Comparisons of psi and subliminal perception have noted that "right hemisphere" processing facilitates subliminal perception (Roney-Dougal, 1981, 1986) - a suggestion which has also been made for psi perception (e.g. Braud, 1975). This could suggest that "right hemisphere targets" such as music, pictures and other non-analytic targets might be preferable to "left-hemisphere" targets such as words and numbers. Another parallel between psi and subliminal perception is that emotive stimuli can evoke clear autonomic responses in the percipient in both cases (Roney-Dougal, 1986).

Serena Roney-Dougal feels that the use of negative emotional targets is both morally and methodologically unsound, partly because some of her subjects reported unpleasant experiences while receiving target impressions and might psi-miss with this kind of target, and also because of the perceptual defence phenomenon seen in subliminal perception. Sondow, Braud & Barker (1981) considered that "defensive" subjects might be likely to psi-miss with unpleasant targets, and devised an "Openness Questionnaire" to identify such subjects. They found no significant difference between the "openness" of receivers who psi-hit and those who psi-missed in a ganzfeld study. Unfortunately, no extensive description is made of the format of the questionnaire, or of whether or not it measures perceptual defensiveness as seen in subliminal perception or some other, unspecified, form of defensiveness.

In perceptual defence, a person may raise his or her recognition threshold for a threatening or unpleasant stimulus - in other words, they perceive it less clearly. Roney-Dougal interprets this as being due to the person's desire or motivation not to perceive the threatening stimulus, a motivation which, she feels, may underlie psi-missing also. However, Dixon reports experiments which suggest that the perceptual defence effect, rather than representing the motivations of the experimental participant, is best explained in physiological terms: emotive stimuli cause changes in a person's arousal level which in turn affect the sensitivity of the sensory receptors.

Whatever the mechanism of the effect of emotional stimuli on recognition thresholds, it is clear that this effect is not uni-directional. One aspect of perceptual defence which, it seems, tends to be overlooked is sometimes called vigilance. While some people may raise their recognition thresholds to emotional stimuli, others may actually *lower* them (Brown, 1961; Dixon, 1981). Without digressing too much on the reasons for this apparent contradiction, it has been found that there is a correlation between personality-type and a person's tendency to raise or lower his or her recognition threshold, with extroverts raising their thresholds, and introverts lowering them (Brown, 1961; Corcoran, 1965). This has some interesting implications for parapsychology. While Roney-Dougal felt that the raised recognition thresholds seen in perceptual defence might be linked with the psi-missing of her own subjects with negative emotional targets, other researchers have found the opposite (Delanoy, 1988), and the vigilance effect suggests that some parapsychological subjects could even psi-hit with unpleasant targets. Donn Byrne (1961, 1963, 1964) has developed a "repression-sensitization" scale which indicates whether a person might be

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expected to be defensive or vigilant - perhaps parapsychologists could study the mechanisms of psi-hitting and psi-missing with the help of this scale (Crandall, personal communication, 1988).

Having looked at popular literature, spontaneous cases, and theoretical suggestions from parapsychologists on what might make a good target, I will now make some inferences from areas of psychology which I consider to be relevant to this discussion.

(1) EMOTIONAL RESPONSES TO STIMULI

Mehrabian and Russell (1974) outline a theoretical approach to environmental psychology (the study of the impact of the physical and social environment on man's emotions, attitudes and behaviour). In their own words, "Evidence suggests that there are three basic emotional responses (pleasure, arousal, and dominance) (*the dominance-submissiveness dimension refers to the degree of control which individuals feel they have over a situation or environment*), combinations of which can be used to describe adequately any emotional state (e.g. anxiety). By considering their impacts on these basic emotional dimensions, the effects of diverse stimulus components within or across sense modalities (e.g. color, pitch, texture, temperature) can be readily compared" (preface, Mehrabian & Russell, 1974, [*my italics*]).

There is evidence of considerable intermodality of human response to stimulation - that is, stimulation in one sensory modality may affect perception in another. For instance, people who visualize auditory stimulation tend to agree in associating colour names and mood adjectives with types of music: "Such persons were found to visualize exciting music in bright forms or sharp and angular figures, and slow music in rounder forms" (p. 11, Mehrabian & Russell, 1974). The three basic emotional responses to stimuli reported above (pleasure, arousal and dominance) are seen as providing a measure with which to compare people's varied intermodal responses to stimuli. This is relevant because it suggests that an additional important aspect to our consideration of what might be expected to be salient features of a GESP target is not only the actual physical characteristics of the target, but also the emotional response (a combination of pleasure, arousal and dominance) which that target elicits in the perceiver.

Further, the theory may provide a methodological framework for the consideration of the impact of various target characteristics on our experimental participants (Delanoy, personal communication, 1988). A semantic differential scale is used to measure people's emotional state in particular settings, or to measure their characteristic emotions over time. Mehrabian and Russell's scale comprises 18 adjective pairs describing various aspects of pleasure, arousal and dominance, and their subjects are asked to mark on the scale the degree to which one or other of the adjective pair most accurately reflects their feelings. Semantic differential scales have already been used in parapsychology, though for different purposes than suggested here. McBain et al (1970) used Osgood's Semantic Differential to find pairs of people with common affective reactions to the same concept, though, contrary to their expectations, they found no relation between the degree to which people agreed in their reactions to the target stimulus and their GESP scores with that stimulus. Sondow, Braud & Barker

(1981) used Osgood's Semantic Differential as one of several measures of target picture emotionality. However, it should be possible to make more extensive use of the semantic differential, and it is planned to investigate further how a scale such as Mehrabian & Russell's could be adapted to measure the reactions of parapsychological subjects to targets and to provide a method to standardise descriptions of successful targets.

The second aspect of Mehrabian and Russell's theory of environmental psychology which may be relevant to our discussion about targets is their consideration of how emotional reactions to physical environmental stimuli are related to the concept of approach-avoidance. This they define broadly as including "... physical movement toward, or away from, an environment or stimulus, degree of attention, exploration...favourable attitudes such as...preference or liking..." (p.96, Mehrabian & Russell, 1974). Arousal is seen as a mediator of approach-avoidance behaviour. A literature review suggests that approach-avoidance is an inverted-U-shaped function of arousal: an organism seeks an optimum level of arousal - whether or not it approaches or avoids a stimulus depends on how arousing the stimulus is, and extremely high or low levels of arousal are avoided.

In animals, there is a tendency to explore the unfamiliar. When the stimuli are fear-inducing, animals repeatedly withdraw and approach the stimuli. Mehrabian and Russell note that the animals are maintaining an optimum level of arousal with this behaviour. Similar behaviour is seen in human children and adults (for references see Mehrabian & Russell, 1974; Berlyne, 1960). Anecdotally, humans do seem to have a penchant for voluntarily and repeatedly exposing themselves to negative emotive and fear-inducing stimuli - hair-raising roller coaster rides and horror films, for example.

The idea of approach-avoidance being mediated by arousal relates to the consideration above (re perceptual defence and vigilance) of the merits of using negative emotive targets in parapsychology. It suggests that people might have some attraction to negative emotive targets insofar as these targets tend to *increase arousal*. Too much arousal, however, will cause people to withdraw from an unpleasant target. On the other hand the use of neutral and bland GESP targets is unlikely to arouse our experimental participants at all, consequently failing to elicit approach. Of course, positive emotive targets would also be expected to influence the arousal of our subjects and to elicit approach-avoidance behaviour.

A second area of psychological research which may make suggestions relevant to the question of what makes a good GESP target concerns the characteristics of stimuli which attract people's attention.

(2) STUDIES OF ATTENTION

While the theory discussed in the preceding section suggested that stimuli could be described in terms of people's basic emotional responses to them, other research has examined characteristics of the stimuli themselves, to see what stimulus features tend to attract attention. Insofar as it may be possible to generalise from research on

psychological processes to currently unknown psi processes, this research may be relevant to the discussion here as it could suggest the kind of target features which might attract the attention of our experimental percipients in free-response GESP tasks.

Berlyne (1970) noted the difficulty of even defining what is meant by the word "attention". In his series of experiments (described in Berlyne, 1960) on curiosity, conflict and arousal he seems to use an operational definition. These experiments typically presented the subject simultaneously with several stimuli and observed the percipient's eye fixation movements - the inference being that attention was given to the stimulus which attracted most eye fixation (e.g. Berlyne, 1958). Other experiments used a different measure of attention, allowing subjects to expose themselves to very brief sights of stimulus pictures as many times as they liked - presumably attention was attracted by the stimuli which were chosen to be seen most often by subjects. The characteristics of stimuli which seemed to influence direction of attention included: intensity; brightness; contrast; colour; novelty; complexity; and incongruity.

Intensity. Berlyne (1960) states that the intensity of stimulation is seen in "the frequency of nerve impulses and the number of fibers activated" (p.170) in the reticular arousal system. Generally, large stimuli are more intense than small stimuli; "warm" colours (e.g. red) are more intense and arousing than "cold" colours (e.g. blue); high-frequency sounds are more intense than low frequency sounds; and (in cats and monkeys) painful stimuli are most intense, followed by proprioceptive, auditory, and visual stimuli respectively. Berlyne found that attention was attracted by relatively intense stimuli - for example, to larger than to smaller circles; to brighter than to dimmer visual stimuli. Intensity is related to brightness, which also appears to attract attention.

Colour. Infants preferred looking at colour to looking at black and white stimuli. Adults' attention was attracted more to a coloured stimulus than to a white one (Berlyne, 1960).

Contrast. It was found that attention was attracted to a lighter stimulus on black and medium grey backgrounds, and to a darker stimulus on a white background. So, contrast with the background attracted attention. Above we saw that brightness also attracts attention. When presenting subjects with stimuli which differed from their background to equal extents but in different directions, it was found that subjects were more likely to respond to the lighter stimulus - that is, in the absence of a contrast difference, brightness was a secondary determinant of attention (McDonnell, 1968).

Novelty. This can be defined as an unusual combination of parts of various objects, or a change from the kind of stimulus to which the organism has recently been exposed (Stotland & Canon, 1972). It has repeatedly been found that novel stimuli attract more attention than familiar stimuli (e.g. Langer, Fiske, Taylor & Chanowitz, 1976; Berlyne, 1958), though the effect of novelty declines over time (perhaps as the subject habituates to the stimulus and

arousal drops). Berlyne (1960) considers attention to be most effectively attracted by a stimulus whose novelty is often renewed. Novelty is related to change or surprisingness of a stimulus (Stotland & Canon, 1972). On surprise, Berlyne says "In experiments on learning, orienting behaviour (*a set of psychological and physiological responses through which the organism "sits up and takes notice" when an aspect of its environment changes*) is often found to be strengthened by an unheralded change in experimental conditions" (p. 98, Berlyne, 1960, *[my italics]*). This observation strongly resembles one made from a parapsychological experiment by Roll & Harary (1972), that "some of the more interesting results came when unannounced changes in the experiment were made spontaneously", and similar results occurred "when there was a last-minute change in the target materials" (p.4).

Complexity. This can be defined as the number of distinguishable parts which a stimulus possesses, the degree of difference among these parts, and the difficulty of integrating the parts involved (Stotland & Canon, 1972). Incongruity, evidently related to both complexity and novelty, was found by Berlyne (1958) to attract attention. Under examination, the distinction between complexity and novelty grows blurred, and, as Stotland & Canon point out, both involve stimulus change. Humans seem compelled to attend to stimulus change - a response which might be expected to be evolutionarily adaptive. Infants are attracted to relatively complex visual patterns and the attention of adults is also determined partly by stimulus complexity (Berlyne, 1960; Jeffrey, 1968).

This research on the determinants of selective attention also states that, consistent with the discussion earlier of approach-avoidance behaviour, people seek an optimum level of arousal: either too much or too little arousal is unpleasant for individuals, and factors such as stimulus novelty, complexity, intensity and incongruity are seen as contributing to an organism's arousal.

The research outlined above tended to use fairly sterile tachistoscopic stimulus presentation, however more recent studies of human causal judgement in social situations have shown that these early findings can generalise to much more realistic and complex situations. Shelley Taylor and Susan Fiske (1978), reviewing the literature on the influence of salient stimuli on people's causal judgements, found that **bright, contrasting, moving and novel** stimuli all attract attention in social situations (e.g. Langer et. al., 1976; McArthur & Post, 1977). Movement can be regarded as simply another aspect of stimulus complexity/novelty, and we have already seen that stimulus change (a feature of movement) compels attention.

As it is not yet clear whether the process of psi perception is similar to perception with our known senses it may be argued that the above findings from psychology on attention-grabbing stimulus characteristics may not generalise to the "psi stimulus". However, it would seem to be evolutionarily adaptive for any organism to attend to bright, contrasting, moving and novel stimuli as such features may indicate either food or threat to the organism. Insofar as psi perception may be an evolved attribute or

For parapsychologists, these findings suggest that: 1. stimuli which are likely to attract the attention of our experimental participants and consequently make successful GESP targets may possess the following characteristics in some (as yet unspecified) degree or form: movement, complexity, novelty, incongruity, contrast, colour, brightness and intensity; and, 2. these attention-determining target characteristics must be present at **moderate levels** - too much and our subjects will be overwhelmed, too little and they will be bored.

SOME LIMITATIONS OF THIS PAPER

Although this paper may seem to have rambled over a wide range of subjects, it has mainly been restricted to a consideration of targets' physical features, and has not examined in any depth the idea that "the target" is in part defined by the experimental participant's own personal reactions to and interactions with it. Taylor & Fiske (1978) considered some ways in which the salience of a stimulus may be influenced by factors independent of the actual physical stimulus characteristics, and the following table summarizes their findings.

Table 2 (after Taylor & Fiske, 1978)

Determinants of Selective Attention

Properties of Stimuli

- Brightness
- Contrast
- Movement
- Novelty

Properties of Situation

- Environmental Cues
- Instructional Set

Properties of Perceiver

- Temporary Need States
- Enduring Individual Differences in Traits, Reinforcement Schedules, Schemas

As Table 2 suggests, properties of a situation and properties of the perceiver may influence what aspects of an individual's environment, or a free-response target, appear as salient to any individual. For instance, if a person is hungry then food will become especially salient to that individual. An individual's cognitive schemata will play some part in determining the direction of his or her attention (Stotland & Canon,

1972). If a person has a phobia of spiders, then a picture of a spider will be very salient to that person, while it may have no impact on another person who has a phobia about water. If we as researchers instruct our experimental participants to attend to one aspect of their environment, then that feature will become salient to them. So, we see that there are many influences on what makes target characteristics grab attention, and it is unwise to restrict our view to physical target characteristics alone. Nevertheless, these conclusions about the salience of physical target characteristics remain valid so long as it is appreciated that they do not give the whole picture.

SUMMARY AND CONCLUSIONS

The present paper considered theoretical ideas of what might be expected to make a successful free-response GESP target.

1. Popular literature on the training of psychic powers suggested that emotional impact and human interest content made good targets. A survey of patterns seen in spontaneous cases seemed to support these observations: the bulk of the information transmitted concerned negative events related to humans, though reporting bias accounted for some of this pattern. While parapsychologists could not physically harm their subjects, it was suggested that the emotional impact seen in spontaneous cases could be incorporated into target material for experimental research, as observations from spontaneous cases suggested that such targets might be expected to have more success in an experimental setting than trivial or impersonal targets.

2. Varied theoretical suggestions by parapsychologists on what might make a good target suggested that meaningful, emotional and potent targets could be expected to be successful in GESP research. Studies of characteristics of good targets in conventional psychophysiology suggested that targets in parapsychology should stand out from their background. This might be achieved by having the target event occur suddenly, be discrete in time and be "important" to the percipient.

Several parallels were noted between subliminal and psi perception. From perceptual defence and vigilance effects seen in subliminal perception it was suggested that, paradoxically, while some parapsychological subjects might be expected to psi-miss with negative emotional targets, others might psi-hit with such targets. It was suggested that the Repression-Sensitization Scale, diagnostic of an individual's tendency to be defensive or vigilant, might be useful to parapsychologists wishing to pursue these ideas.

3. Two areas of psychological research relevant to the target question were described. Firstly, from environmental psychology it was suggested that greater attention should be given to the subject's emotional response to the target stimuli, and that, from the connection between arousal and approach-avoidance, the use of negative emotive stimuli could on the whole be more likely to arouse our experimental participants and attract their attention than neutral or bland stimuli. Secondly, research on attention found that attention was attracted by stimuli which were relatively intense, bright, contrasting, colourful, novel, complex and incongruous - though only at moderate levels. Similarly, social psychology, using more complex and realistic settings than attention research, found that bright, moving, contrasting and novel stimuli attracted attention.

4. Some of the limitations of this paper were noted: there was a narrow focus on physical target characteristics without considering inevitable influences of properties of the perceiver and the environment on what aspects of the target stimuli would appear salient to any individual. Nevertheless, the findings presented here were valid in their relevance to considerations of the target question given that this paper does not present a comprehensive and exhaustive overview of the subject of targets in parapsychological research.

We have seen that there is some consistency in the suggestions of popular "psychic training" literature, spontaneous cases, and parapsychologists' theoretical ideas on the likely characteristics of successful GESP targets. These findings appear to suggest that our targets should be **psychologically salient** and **physically salient**: 1. targets in parapsychological research should be meaningful, have emotional impact and human interest - this may make them salient in the minds of our experimental participants; 2. targets should also be physically salient by standing out from their backgrounds - properties such as movement, novelty, complexity, incongruity, brightness and contrast tend to make stimuli physically salient.

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